

Antimicrobial Use in Persons with *E. coli* O157 Infection in FoodNet Sites

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Background: In the US, an estimated 73,000 *Escherichia coli* O157:H7 infections occur annually. Empiric treatment with antimicrobial agents is common for patients with a diarrheal illness, although some evidence suggests that treatment of these infections with some antimicrobial agents may increase the risk of hemolytic-uremic syndrome and thus is not recommended.

Methods: The Foodborne Diseases Active Surveillance Network (FoodNet) conducted active surveillance for laboratory-confirmed cases of *E. coli* O157. Cases were interviewed during two twelve month studies in 1996-97 and 1999-2000. Demographic and clinical information, including antimicrobial treatment, were ascertained by patient interview. Timing of antimicrobial treatment was ascertained only in the second study.

Results: A total of 677 cases with laboratory-confirmed *E. coli* O157 infections were interviewed. Overall, 295 (45%) reported treatment with an antimicrobial agent. Treatment was less common among children (defined as persons <15 years old) than among older persons (34% vs. 71%, $p < 0.01$). Among those reporting treatment timing, 28% were treated after a stool culture was known to have yielded *E. coli* O157. Of 295 persons reporting the type of antimicrobial, 53% took a quinolone, 26% a sulfonamide, and 21% with another type. Quinolone treatment was much less common among children than adults (10% vs. 76%, $p < 0.01$).

Conclusion: Antimicrobial treatment of *E. coli* O157 infection was more common among adults than children, and occurred both empirically and after diagnosis of the etiology. Further efforts are needed to inform clinicians that IDSA guidelines for treatment of diarrhea advise careful judgment when considering empiric treatment of most populations, especially when infection with *E. coli* O157 is confirmed or suspected.